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IUTAM Home Page:

<http://www.iutam.org> (NEW site)

<http://www.iutam.info> (OLD site)

International Union of Theoretical and Applied Mechanics

N-2009-2

November 2009

President's Address

Dear Colleagues,

In August 2009 the Bureau and the Executive Committee of the Congress Committee met in Beijing, the site of the 2012 International Congress of Theoretical and Applied Mechanics. These groups were able to tour the venue for the Congress, the China National Convention Center, one of the buildings constructed for the 2008 Olympic Games (it housed the fencing competition, for example) and subsequently remodelled internally. It is a most impressive building, a little way north of the Water Cube along the boulevard of the Olympic Green. There are numerous hotels within walking distance of the Congress site, and a subway station right next door. The Bureau and Executive Committee were able to have extensive discussions with the President of the Congress, Yilong Bai, and its Secretary-General, Jianxiang Wang, together with other members of the Local Organising Committee, the details of which are summarised elsewhere in this newsletter. It is clear that ICTAM2012, like its predecessors, will be a highly stimulating Congress, and we encourage everyone in the global mechanics community to make every effort to attend.

Since the last newsletter in June, we have received the sad news of the death of another major figure of 20th century mechanics, Frithiof Niordson. He was born in 1922 of a Russian mother and a Swedish father. He studied at KTH in Stockholm and then did a PhD with William Prager at Brown University in the United States; however, from 1958 onwards Frithiof Niordson was a full professor at the Technical University of Denmark (DTU). His scholarly research covered a wide range of topics in applied and computational mechanics, including vibrations, stability, inverse eigenvalue problems, the theory of plates and shells and structural optimisation. He also played major roles both in Denmark and internationally, being the driving force behind the development of the Danish Center for Applied Mathematics and Mechanics (of which he was secretary from its inception in 1969 until 1992) and serving with great distinction as Secretary-General (1968-1976), President (1976-1980) and Vice-President (1980-1984) of IUTAM. He had many international collaborators and was instrumental in enabling younger Danish mechanics scholars to develop their international careers. He will be sorely missed.

We all look forward to participating in the meetings of the IUTAM General Assembly and Congress Committee in Paris in July 2010 and I am particularly grateful to the Secretary-General, Frédéric Dias, for making all the arrangements. Further information for delegates planning to attend is presented elsewhere in this newsletter.

Tim Pedley
President of IUTAM
Cambridge

Short Report on IUTAM Bureau Meeting, Beijing, August 2009

In 2009 the IUTAM Bureau meeting was held in two sessions on 22 and 23 August in the Crowne Plaza Park View Wuzhou hotel, Beijing, China.

Among the items discussed at the meeting were the following:

Matters concerning Adhering, Affiliated and Associate Organizations

The state of affairs with respect to CACOFD and BICTAM (future application) was discussed. Two new countries have shown interest in the newly established Associate Membership.

Matters concerning IUTAM Working Parties

The state of affairs with respect to the Working Parties and their membership was discussed.

Matters concerning ICSU

The ICSU General Assembly of 21-24 October 2008 in Maputo, Mozambique, was discussed and the 3rd ICSU Regional Consultation of 13-14 October 2009 in Malaysia was prepared.

Reports by the Treasurer and the Secretary-General

The financial shape of the Union was discussed, as well as the state of affairs with respect to the IUTAM Symposia.

IUTAM Website

A preview of the new website was performed (see below for additional information).

IUTAM Proceedings

The survey conducted among organisers of IUTAM symposia and the response of publishers were analyzed.

IUTAM Symposia

The possibility of allowing submissions every year as opposed to every two years was discussed.

The next meetings of the Bureau are scheduled for the General Assembly in Paris, July 16-19, 2010. The Bureau will have two meetings, on Friday, July 16, and on Monday, July 19.

Frédéric Dias
Secretary-General of IUTAM
Cachan and Dublin

Short Report on IUTAM XCCC Meeting, Beijing, August 2009

The Executive Committee of the Congress Committee (XCCC) met in Beijing on August 21-24, 2009. The Committee held three meetings, the first on Saturday morning, August 22, the second on Sunday afternoon, August 23, the third as a site visit of Congress facilities on Monday morning, August 24. All members of the Committee were present for all meetings. The Executive Committee of the Congress Committee extends thanks and appreciation to our Chinese hosts for their reception, warm hospitality, and excellent organization of these meetings.

The following major decisions were made:

1. The dates of ICTAM2012 are now set as *Sunday, August 19 - Friday, August 24, 2012*.
2. Various comments received regarding ICTAM2008 were recommended to the organizers as ICTAM2012 draws closer.
3. It was agreed that the Secretary would re-invite three members of the International Papers Committee who had served one term for ICTAM2008 and would invite an IPC member representing the Chinese community. Two additional members, one in fluid mechanics (F) and one in solid mechanics (S) should be invited. A list of individuals was developed and prioritized.
4. After much discussion of the 20 proposals received for mini-symposia, and the votes received from the CC, the following topics were agreed upon:

MS-1: Mechanical challenges in energy

MS-2: Mechanics of natural disasters

MS-3: Fluid-Structure interactions in biological systems

MS-4: Mechanics of transport in microfluidic devices

MS-5: Dynamics and control of morphing structures

MS-6: Effects of small size scales in materials modeling

Two co-chairs were named for each mini-symposium, except for MS-1 which was judged to be so broad that three co-chairs would be required. The Secretary has now invited the first round of chairs suggested.

5. A new *list of pre-nominated sessions* was agreed upon. This list will be made public on the Congress website prior to the General Assembly meeting in July 2010.

Numerous practical recommendations and decisions on other aspects of the Congress were made.

The next meetings of the XCCC and CC are scheduled for the General Assembly in Paris, July 16-19, 2010. The XCCC will have two meetings, on Friday, July 16, and on Monday, July 19. The full CC will also have two meetings, on the mornings of Saturday, July 17, and Sunday, July 18.

Hassan Aref
Secretary of the Congress Committee of IUTAM
Blacksburg and Lyngby

From the Office of the Secretary-General

In the previous newsletter, I wrote that the new website would be operational in the last quarter of 2009. The new website is now a reality and you are encouraged to connect to it:

<http://www.iutam.org>

On behalf of IUTAM, I would like to thank Patrick Anderson for the great job he did on the previous website. Patrick Anderson became involved in the IUTAM website just after ICTAM-2000. In agreement with common practice at that time, the first IUTAM website, which was developed in conjunction with the website of ICTAM-2000, was of a static character: in each web page all information had to be inserted by hand. Plans for the content and lay-out of a more modern website were made. It was decided that the website should have a dynamic character as largely as possible, implying that on most visible web pages changing information should be generated automatically from a dynamic database structure. The associated changes should then be inserted into the database at secretariat level. The previous IUTAM website was launched in February 2001. Since then Patrick Anderson has done the maintenance and further development of the IUTAM website in a devoted and reliable manner. Since I became Secretary General in November 2008, Patrick has kept the IUTAM website running in Eindhoven. The developer of the new website was able to keep a major part of Patrick Anderson's developments. The old Website (<http://www.iutam.info>) will be kept alive for a few months, until the transfer is fully completed.

Among the capabilities of the new website are the following:

- Online application for IUTAM Symposia and IUTAM Summer Schools (see the Newsletter's section on proposals for IUTAM Symposia and IUTAM Summer Schools for 2012 and 2013)
- Forum
- Extended intranet for Bureau and Congress Committee Members
- News

Frédéric Dias
Secretary-General of IUTAM
Cachan and Dublin

IUTAM Symposia 2010

10-1 = GA.08-01 IUTAM Symposium on Computational Aero-Acoustics (CAA) for Aircraft Noise Prediction

Place: Southampton, UK
Date: March 29 – March 31, 2010
Chairman: **Prof. J. Astley**
University of Southampton
Institute of Sound and Vibration Research
Highfield
Southampton SO17 1BJ UK
Email: rja@isvr.soton.ac.uk

IUTAM Representative on Scientific Committee: Prof. A. Kluwick

10-2 = GA.08-07 IUTAM Symposium on Nonlinear Stochastic Dynamics and Control

Place: Hangzhou, China
Date: May 10 – May 14, 2010
Chairman: **Prof. W.Q. Zhu**
Zhejiang University
Department of Mechanics
310027 Hangzhou China
Email: wqzhu@yahoo.com
Co-Chairman: **Prof. Y.K. Lin**
Florida Atlantic University
Center for Applied Stochastics Research
777 Glades Rd, 33431-0991 Boca Raton, FL, USA
Email: linyk@fau.edu

IUTAM Representative on Scientific Committee: Prof. K. Sobczyk

10-3 = GA.08-15 IUTAM Symposium on Dynamics Modeling and Interaction Control in Virtual and Real Environments

Place: Budapest, Hungary
Date: June 07 – June 11, 2010
Chairman: **Prof. G. Stépán**
Budapest University of Technology and Economics
Department of Applied Mechanics
Muegyetem rkp 5
H-1111 Budapest Hungary
Email: stepan@mm.bme.hu
Email: iutam2010@mm.bme.hu
Webpage: <http://www.iutam2010.org>

IUTAM Representative on Scientific Committee: Prof. F.L. Chernousko

10-4 = GA.08-03 IUTAM Symposium on Bluff Body Wakes and Vortex-Induced Vibrations

Place: Capri Island, Italy
Date: June 22 – June 25, 2010
Chairman: **Prof. C.H.K. Williamson**
Cornell University
Department of Mechanical and Aerospace Engineering
252 Upson Hall
NY 14853-7 Ithaca USA
Email: cw26@cornell.edu
Co-Chairman **Dr. T. Leweke**
CNRS / Université Aix- Marseille I & II
Institut de Recherche sur les Phénomènes Hors
Equilibre (IRPHE)
49, rue F. Joliot-Curie - B.P. 146
F-13384 Marseille Cedex 13 France
Email: Thomas.Leweke@irphe.univ-mrs.fr

IUTAM Representative on Scientific Committee: Prof. P.A. Monkewitz

10-5 = GA.08-14 IUTAM Symposium on Nonlinear Dynamics for Advanced Technologies and Engineering Design (NDATED)

Place: Aberdeen, UK
Date: July 27 – July 30, 2010
Chairman: **Prof. M. Wiercigroch**
University of Aberdeen, School of Engineering
Centre for Applied Dynamics Research
Kings College, AB24 3UE Aberdeen UK
Email: m.wiercigroch@abdn.ac.uk

Co-Chairman: **Prof. G. Rega**
Sapienza Universita di Roma
Dipartimento di Ingegneria Strutturale e Geotecnica
Via Antonio Gramsci 53, 00197 Roma, Italy
Email: giuseppe.rega@uniroma1.it

IUTAM Representative on Scientific Committee: Prof. D.H. van Campen

10-6 = GA.08-08 IUTAM Symposium on Surface Effects in the Mechanics of Nanomaterials and Heterostructures

Place: Beijing, China
Date: August 08 – August 13, 2010
Chairman: **Prof. A. Cocks**
University of Oxford
Department of Engineering Science
ParkRoad, OX1 3PJ Oxford UK
Email: alan.cocks@eng.ox.ac.uk

Co-Chairman: **Prof. J.-X. Wang**
Peking University
Dept of Mechanics & Aerospace Engineering
100871 Beijing, China
Email: jxwang@pku.edu.cn

IUTAM Representative on Scientific Committee: Prof. B.L. Karihaloo

10-7 = GA.08-12 IUTAM Symposium on Analysis and Simulation of Human Motion

Place: Leuven, Belgium
Date: September 13 – September 15, 2010
Chairman: **Prof. J. van der Sloten**
K.U. Leuven, Faculty of Engineering BMGO
Celestijnenlaan 300c, 3001 Leuven Belgium
Email: jos.vandersloten@mech.kuleuven.be

Co-Chairman: **Prof. I. Jonkers**
Faculty of Kinesiology and Rehabilitation Sciences
Department Biomedical Kinesiology,
Research Center for Movement Control and
Neuroplasticity,
Tervuursevest 101, 3001 Leuven, Belgium
Email: Ilse.Jonkers@faber.kuleuven.be

IUTAM Representative on Scientific Committee: Prof. F. Pfeiffer

IUTAM Symposia 2011**GA.08-09 (=S.3) IUTAM Symposium on Linking Scales in Computations: From Microstructure to Macro-scale Properties**

Place: Shalimar, FL, USA
Date: May 16 - May 19, 2011
Chairman: **Prof. O. Cazacu**
University of Florida
REEF, 1350 N. Poquito Road
Shalimar FL USA
Email: cazacu@reef.ufl.edu

IUTAM Representative on Scientific Committee: Prof. J.B. Leblond

GA 08-06 (=F/S.3) IUTAM Symposium on Computer Models in Biomechanics: From Nano to Macro

Place: Stanford, CA, USA
Date: August 29 – September 02, 2011
Chairman: **Dr. E. Kuhl**
Stanford University
Dept. of Mechanical Eng & Bioengineering
496 Lomita Mall, Durand 217
CA-94305-4 Stanford USA
Email: ekuhl@stanford.edu

Co-Chairman: **Prof. G.A. Holzapfel**
Graz University of Technology, Institute for
Biomechanics, Kronesgasse 5-I, 8010 Graz, Austria
Email: holzapfel@tugraz.at

IUTAM Representative on Scientific Committee: Prof. J. Engelbrecht

**GA 08-04(=F/S.1) IUTAM Symposium on 50 Years of Chaos:
Applied and Theoretical**

Place: Kyoto, Japan
Date: November 28 - December 02, 2011
Chairman: **Prof. T. Hikihara**
Kyoto University
Department of Electrical Engineering
Katsura, Nishikyo, 615-8510 Kyoto Japan
Email: hikihara@kuee.kyoto-u.ac.jp
Co-Chairman: **Prof. T. Kambe**
Institute of Dynamical Systems, Higashi-yama 2-11-3
Meguro-ku, 153-0043 Tokyo, Japan
Email: kambe@ruby.dti.ne.jp

IUTAM Representative on Scientific Committee: Prof. D.H. van Campen

GA 08-02 (=F.3) IUTAM Symposium on Bluff Body Flows

Place: Kanpur, India
Date: *2011, no exact dates available yet*
Chairman: **Prof. S. Mittal**
Indian Institute of Technology
Department of Aerospace Engineering
UP 208016 IIT Kanpur, India
Email: smittal@iitk.ac.in
Co-Chairman: **Prof. G. Biswas**
Indian Institute of Technology, Department of
Mechanical Engineering, UP 208016 IIT Kanpur
India
Email: gtm@iitk.ac.in

IUTAM Representative on Scientific Committee: Prof. T. Kambe

GA 08-05(=F/S.2) IUTAM Symposium on Mechanics of Liquid and Solid Foams

Place: Austin, TX, USA
Date: *2011, no exact dates available yet*
Chairman: **Prof. S. Kyriakides**
University of Texas at Austin
Center for Mechanics of Solids, Structures and Materials
210 East 24th Street
WRW 110, TX 78712 Austin USA
Email: skk@mail.utexas.edu

Co-Chairman: **Dr. A.M. Kraynik**
Sandia National Laboratories, Dept. 1514-MS 0836
NM 87185-0836 Albuquerque, USA
Email: amkrayn@sandia.gov

IUTAM Representative on Scientific Committee: Prof. N.A. Fleck

GA 08-10 (=S.6) IUTAM Symposium on Full-field Measurements and Identification in Solid Mechanics

Place: Cachan, France
Date: *2011, no exact dates available yet*
Chairman: **Prof. F. Hild**
LMT-Cachan, 61 Avenue du President Wilson, F-94235
Cachan cedex, France
Email: hild@lmt.ens-cachan.fr

Co-Chairman: **Prof. D. Espinosa**
Northwestern University
Department of Mechanical Engineering
60208-3111 Evanston IL USA
Email: espinosa@northwestern.edu

IUTAM Representative on Scientific Committee: Prof. G. Maier

**GA 08-11 (=S.9) IUTAM Symposium on Human Body Dynamics:
From Multibody Systems to Biomechanics**

Place: Waterloo, Canada
Date: *2011, no exact dates available yet*
Chairman: **Prof. J.J. McPhee**
University of Waterloo
Department of Systems Design Engineering
N2L 3G1 Waterloo, Canada
Email: mcphee@real.waterloo.ca

IUTAM Representative on Scientific Committee: Prof. F.L. Chernousko

**GA 08-13 (=S.13) IUTAM Symposium on Impact Biomechanics in
Sport**

Place: Dublin, Ireland
Date: *2011, no exact dates available yet*
Chairman: **Prof. M.D. Gilchrist**
University College Dublin
Department of Mechanical Engineering
Belfield, Dublin 4
Ireland
Email: michael.gilchrist@ucd.ie

IUTAM Representative on Scientific Committee: Prof. D.H. van Campen

IUTAM Summer Schools

2010 IUTAM Summer School on Mechanics of Soft Materials

Place: Evanston, IL, USA
Event dates: *2010, no exact dates available yet*
Coordinator: **Prof. W. Liu**
Northwestern University
Department of Mechanical Engineering
2145 Sheridan Road
IL 60208-3 Evanston USA
Email: w-liu@northwestern.edu

2010 IUTAM-CISM Summer School on Modelling and Simulation of Multiscale Continuum Systems

Place: Udine, Italy
Event dates: June 28 – July 2, 2010
Coordinators: **Prof. P. Papadopoulos and Prof. T.I. Zohdi**
University of California at Berkeley
Dept. Of Mechanical Engineering
6117 Etcheverry Hall
Mailstop 1740
CA 94720-1 Berkeley USA
Emails: panos@me.berkeley.edu and
zohdi@me.berkeley.edu

IUTAM Co-Sponsored Event

2010 First Joint International Conference on Multibody System Dynamics

Place: Lappeenranta University of Technology, Department of Mechanical Engineering, Lappeenranta, Finland
Date: May 25 - May 27, 2010
Coordinator: **Prof. Aki Mikkola**
Email: aki.mikkola@lut.fi

IUTAM General Assembly in 2010

The dates of the 2010 meetings of the General Assembly of IUTAM have been set at 17-18 July 2010 in Paris, France, with associated committees also meeting on 16 and 19 July. More detailed information will be provided in due time.

Proposals for IUTAM Symposia and IUTAM Summer Schools for 2012 and 2013

The call for proposals for IUTAM Symposia and IUTAM Summer Schools for the years 2012 and 2013 is now available on the new IUTAM Website (<http://www.iutam.org>). Information can be obtained from the IUTAM Secretariat. The deadline for online submission of proposals is 1 April 2010.

Notice on IUTAM Symposia

The IUTAM Symposia are reserved to invited participants. Those wishing to participate in an IUTAM Symposium are therefore advised to contact the Chairman of the Scientific Committee in due time in advance of the meeting.

IUTAM is a member of ICSU

Notice on availability of IUTAM Newsletter

The IUTAM Newsletter is available (free of charge) to whom it concern upon request from the IUTAM Secretary-General.

IUTAM Home Page:

<http://www.iutam.org> (NEW site)

<http://www.iutam.info> (OLD site)